

<110> Case, Casey C.
Zhang, Lei
Sangamo Biosciences, Inc.

<130> 019496-002000US

<141> 1999-09-14

<151> 1999-01-12

<151> 1999-01-12

<170> PatentIn Ver. 2.1

<211> 25

<213> Artificial Sequence

<223> Description of Artificial Sequence:exemplary motif
of C2H2 class of zinc finger proteins (ZFP)

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<221> MOD_RES
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<223> Xaa = any amino acid

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<221> MOD_RES
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<223> Xaa = any amino acid, may be present or absent

<221> MOD_RES

<223> Xaa = any amino acid

<221> MOD_RES

<223> Xaa = any amino acid

<221> MOD RES

<223> Xaa = any amino acid, may be present or absent

Cys Xaa Xaa Xaa Xaa Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa

15

Xaa Xaa His Xaa Xaa Xaa Xaa Xaa His
 20 25

<210> 2

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:ZFP target site
 with two overlapping D-able subsites

<220>

<221> modified_base

<222> (1)..(2)

<223> n = g, a, c or t

<220>

<221> modified_base

<222> (5)

<223> n = g, a, c or t

<220>

<221> modified_base

<222> (8)

<223> n = g, a, c or t

<220>

<221> modified_base

<222> (9)

<223> n = a, c or t; if g, then position 10 cannot be g
 or t

<400> 2

nngkngknnn

10

<210> 3

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:ZFP target site
 with three overlapping D-able subsites

<220>

<221> modified_base

<222> (1)..(2)

<223> n = g, a, c or t

<220>

<221> modified_base

<222> (5)

<223> n = g, a, c or t

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<221> modified_base

<222> (8)

<223> n = g, a, c or t

089979-1030901

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<210> 8
<211> 5
<212> PRT
<213> Artificial Sequence
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<223> Description of Artificial Sequence:linker

Gly Gly Gly Gly Ser
1 5

<213> Artificial Sequence

<223> Description of Artificial Sequence:linker

Gly Gly Arg Arg Gly Gly Gly Ser
1 5

<213> Artificial Sequence

<223> Description of Artificial Sequence:linker

Leu Arg Gln Arg Asp Gly Glu Arg Pro
1 5

<213> Artificial Sequence

<223> Description of Artificial Sequence:linker

Leu Arg Gln Lys Asp Gly Gly Gly Ser Glu Arg Pro
1 5 10

<213> Artificial Sequence

<223> Description of Artificial Sequence:linker

Leu Arg Gln Lys Asp Gly Gly Gly Ser Gly Gly Gly Ser Glu Arg Pro
1 5 10 15

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<400> 14
g gta ccg ggc aag aag aag cag cac atc tgc cac atc cag ggc tgt ggt 49
Val Pro Gly Lys Lys Lys Gln His Ile Cys His Ile Gln Gly Cys Gly
      1             5             10             15

aaa gtt tac ggc cgc tcc gac aac ctg acc cgc cac ctg cgc tgg cac    97
Lys Val Tyr Gly Arg Ser Asp Asn Leu Thr Arg His Leu Arg Trp His
      20             25             30

acc ggc gag agg cct ttc atg tgt aca tgg tcc tac tgt ggt aaa cgc    145
Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg
      35             40             45

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ttc acc aac cgc gac acc ctg gcc cgc cac aag cgt acc cac acc ggt 193
 Phe Thr Asn Arg Asp Thr Leu Ala Arg His Lys Arg Thr His Thr Gly
 50 55 60
 gag aag aaa ttt gct tgt ccg gaa tgt ccg aag cgc ttc atg cgc tcc 241
 Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg Ser
 65 70 75 80
 gac cac ctg tcc aag cac atc aag acc cac cag aac aag aag ggt gga 289
 Asp His Leu Ser Lys His Ile Lys Thr His Gln Asn Lys Lys Gly Gly
 85 90 95
 tcc 292
 Ser

<210> 15
 <211> 97
 <212> PRT
 <213> Artificial Sequence
 <223> Description of Artificial Sequence:designed ZFP
 construct (from KpnI to BamHI) targeting 9-base
 pair target site in VEGF promoter

<400> 15
 Val Pro Gly Lys Lys Lys Gln His Ile Cys His Ile Gln Gly Cys Gly
 1 5 10 15
 Lys Val Tyr Gly Arg Ser Asp Asn Leu Thr Arg His Leu Arg Trp His
 20 25 30
 Thr Gly Glu Arg Pro Phe Met Cys Thr Trp Ser Tyr Cys Gly Lys Arg
 35 40 45
 Phe Thr Asn Arg Asp Thr Leu Ala Arg His Lys Arg Thr His Thr Gly
 50 55 60
 Glu Lys Lys Phe Ala Cys Pro Glu Cys Pro Lys Arg Phe Met Arg Ser
 65 70 75 80
 Asp His Leu Ser Lys His Ile Lys Thr His Gln Asn Lys Lys Gly Gly
 85 90 95
 Ser

<210> 16
 <211> 25
 <212> DNA
 <213> Artificial Sequence
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 <223> Description of Artificial Sequence:PCR primer
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 <400> 16
 gaattctgtg ccctcactcc cctgg 25

T06080"96252660

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<220>
<223> Description of Artificial Sequence:PCR primer
      VEGFD2
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<400> 21
accgcttacc ttggcatggt ggagg

25

<210> 22
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<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer
mVEGF

<400> 22
gccccattg gtaccctggc ttcagttccc tggcaaca

38

<210> 23
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:PCR primer
VEGFD

<400> 23
gcagaaagtc catggtttcg gaggcc

26

T06080" 96453669